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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,600	05/30/2001	Kazunori Iwamoto	862.C2246	4961
5514 7590 05/07/2004 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER NGUYEN, HUNG	
			ART UNIT 2851	PAPER NUMBER

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/866,600	<b>Applicant(s)</b> IWAMOTO ET AL. <span style="float: right;">AK</span>	
	<b>Examiner</b> Hung Henry V Nguyen	<b>Art Unit</b> 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 52-82 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 52-82 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 52-54, 59-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al (JP-405217837A).

With respect to claims 52-54, 59-82, Nishida (figure 2) discloses a stage apparatus and corresponding method, which comprises substantially all of the basic features of the instant claims such as: a stage (5) movable at least in a long stroke along a first direction and a short stroke along a second direction (X and Y directions), a laser head (6)/interferometer for generating a laser beam; a first reflecting unit (11a) which are arranged on the stage for measuring the stage in a first direction (x-direction) and a second reflecting unit (11b) for measuring the stage in a second direction/Y direction. Nishida further teaches first optical units (9a) which is arranged outside the stage and splits a first laser beam for measuring a position of the stage in a first direction, into first reference and measuring beams and second optical unit (9b-c) which splits a second laser beam for measuring a position of the stage in a second direction, into second reference and measuring beams and the second optical unit is arranged outside of the stage. In figure 2, Nishida does not expressly disclose the mirrors (11b) being arranged outside the stage. However, in figure 1, Nishida teaches a stage apparatus where the

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mirror (11b) is arranged outside the stage (5) for measuring the stage in the second direction.

This provides a clear evidence that it would have been obvious to one having ordinary skill in the art at the time the invention was made to re-arrange the position of the second reflecting unit to obtain the invention as specified in the above claims. It would have been obvious to a skilled artisan to arrange the second reflecting unit outside of the stage for at least the purpose of reducing the physical size and weight of the stage apparatus without being affected by the light path difference caused by the stage device movement. Furthermore, it is noted that a prior art apparatus satisfying the claimed features ( as is clearly illustrated in this case), it would have been obvious to a skilled artisan to rearrangement of parts, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

3. Claims 55-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida in view of Umatabe (U.S.Pat. 5,243,377).

With respect to claims 55-58, Nishida discloses substantially all of the limitations of the instant claims as shown above except for the stage apparatus/exposure apparatus being communicated with a computer network such as LAN or Internet. However, this in itself does not provide any inventive steps. For example, Umatate et al discloses a plural exposure apparatus and a host management system (H-COM), a network interface, a computer and the information relating to each of the exposure apparatuses can be communicated by a computer network (see fig.1 of Umatate et al). It would have been obvious to a skilled artisan to employ a computer network as suggested by Umatate for stage device/exposure apparatus of Nishida for

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remotely and automatically managing, analyzing and troubleshooting and maintenance stage device and the exposure apparatus.

***Response to Amendment/Arguments***

4. Applicant's amendment filed April 7, 2004 has been entered. Claims 31-51 have been cancelled and new claims 60-82 have been added. The Examiner has carefully considered applicant's arguments, in connection with the amendment but does not find them persuasive in overcoming the rejection of record. Applicants argued that "there is no disclosure or suggestion of mixing the positions of the mirrors and detectors and to pick and choose the positions of the various components from two separate embodiments is impermissible hindsight based on solely on Applicant's disclosure". The Examiner respectfully disagrees with the applicant. In response to applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obvious is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. *In re McLaughlin*, 443 F.2d 1391; 170 USPQ 209 (CCPA 1971). Firstly, the rejection here is made under 35 U.S.C. 103(a) and it is the Examiner's position that Nishida'837 discloses the claimed subject matters but for the position of the reflecting mirror (14b) being positioned outside the stage for measuring the stage in the second direction. It is the Examiner's position that placement of that reflecting mirror as claimed "would have been an obvious to one having ordinary skill in the art". Alternately, the Examiner cites figure 2 of

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Nishida for the teaching of providing the reflecting mirror outside of the stage for the purpose of measuring the stage in the second direction. Clearly, the Examiner has established a prima facie case of obviousness of the instant claimed subject matter which has not been overcome by persuasive arguments or objective evidence. It appears very apparent that the artisan viewing Nishida and faced with the problem of space, i.e., wanting to reduce the size and weight of the stage device (see abstract of Nishida), would clearly have recognized that placing the reflecting mirror (14b) on the stage would increase the size and weight of the stage device. This problem itself would clearly have suggested the solution of placing the reflecting mirror (14b) outside the stage, as applicants do, is to presume less than ordinary skill on the part of the artisan. The Examiner does not find applicant's arguments convincing that placing the second reflecting mirror outside the stage would have been unobvious to such a person and furthermore, when a prior art apparatus satisfying the claimed features it would have been obvious to a skilled artisan to rearrangement of parts, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Finally, applicants do not separately argue any further distinct patentability of dependent claims and thus the Examiner believes that they are not additionally patentable over and above the patentability of independent claims.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

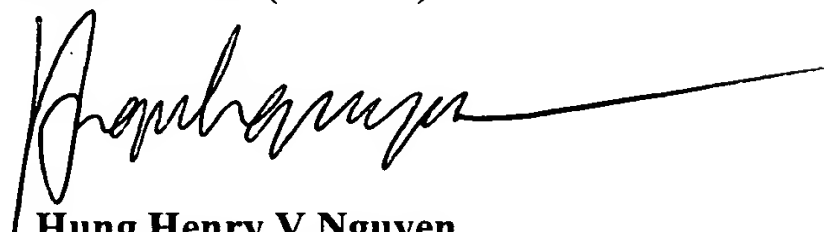
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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 571-272-2112. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Hung Henry V Nguyen**  
**Primary Examiner**  
**Art Unit 2851**